Post Doctoral fellow position in Chemical Biology of Nucleic Acids

A two-years post-doctoral position is currently available in the laboratory of Chemistry, Modelling and Imaging for Biology (CMIB) In the team of Dr. Marie-Paule Teulade-Fichou (http://CMIB.curie.fr) Institut Curie. The laboratory is located at the research center of the Institut Curie on the campus of Orsay (Paris-Saclay University- south of Paris, France). Read more ...

The central activity of the CMIB unit is to develop small molecules to probe and control the biological activities of key targets involved in cancer (These are mainly non-B nucleic acid structures (Quadruplexes) and Kinases).

IR-photoexcitable probes designed both for subcellular tracking and targeted photodamage represents also an important research axis. The drug and probe discovery activity is sustained by Molecular Modelling approaches and Multimodal Imaging (TEM, NanoSIMS, IRM). The CMIB unit is hosting the Institut Curie-CNRS proprietary library comprised of over 9000 chemical compounds and the preclinical IRM imaging and chemical imaging facilities.
The main research themes of the unit include:

- G-quadruplex targeting agents
- DNA targeted fluorescent dyes
- Kinase inhibitors
- Photo and radiosensitizers for Retinoblastoma and Glioblastoma therapy.

The main methodological approaches are:

- Chemical biology and medicinal chemistry (Hit to lead optimization)
- Molecular dynamics and virtual screening
- Multimodal imaging for 2D and 3D chemical mapping
- Development of software and Image acquisition, processing and analysis

Key publications

Year of publication 2019

David Partouche, Jérémie Mathurin, Antoine Malabirade, Sergio Marco, Christophe Sandt, Véronique Arluison, Ariane Deniset-Besseau, Sylvain Trépout (2019 Apr 1)

**Correlative infrared nanospectroscopy and transmission electron microscopy to investigate nanometric amyloid fibrils: prospects and challenges.**


**Probing Ligand and Cation Binding Sites in G-Quadruplex Nucleic Acids by Mass Spectrometry and Electron Photodetachment Dissociation Sequencing**

*bioRxiv* : Early view : [DOI: 10.1101/563627](https://doi.org/10.1101/563627)


**Mannose distribution in glycoconjugated tetraphenylporphyrins governs their uptake mechanism and phototoxicity**


Morgan Pellerano, Delphine Naud-Martin, Florence Mahuteau-Betzer, Marie Morille, May Catherine Morris (2019 Feb 15)
Fluorescent biosensor for detection of the R248Q aggregation-prone mutant of p53.

El Hassen Mokrani, Abderrahmane Bensegueni, Ludovic Chaput, Claire Beauvineau, Hanane Djeghim, Liliane Mouawad (2019 Feb 7)
**Identification of New Potent Acetylcholinesterase Inhibitors Using Virtual Screening and In Vitro Approaches.**
*Molecular informatics*: Early view : [DOI: 10.1002/minf.201800118](https://doi.org/10.1002/minf.201800118)

Coralie Caron, Xuan N T Duong, Régis Guillot, Sophie Bombard, Anton Granzhan (2019 Feb 6)
**Interaction of Functionalized Naphthalenophanes with Abasic Sites in DNA: DNA Cleavage, DNA Cleavage Inhibition, and Formation of Ligand-DNA Adducts.**